REMARKS

The only issues outstanding in the Office Action mailed July 14, 2005, are the requirement for restriction and the rejections under 35 U.S.C §112. No rejections over art have been made. Reconsideration of these issues, in view of the following discussion, is respectfully requested.

Requirement for Election

Applicants' traversal of the election of species is maintained, inasmuch as it is submitted that the requirement for election fails to follow the proper procedure as set forth in M.P.E.P. §803.02, entitled "restriction - Markush claims." As noted above, no rejections over art have been made in the present application. The M.P.E.P. states that if the Markush-type claim is *not allowable over the prior art* the examination will be limited to the Markush-type claim and claims to the elected species. The M.P.E.P. continues that, "on the other hand, should no prior art be found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended." See §803.02. The M.P.E.P. clearly states that whether or not the search and examination is to be extended depends on patentability *over art*, not under §112.

However, in the present situation, although no prior art has been cited, the search has apparently not been extended beyond the elected species, in view of the indication at page 2 of the Office Action. It is respectfully submitted that this is improper, and that such an examination should be extended as set forth in the M.P.E.P. The same is respectfully requested.

Rejection Under 35 U.S.C §112

Claims 5 and 8 have been rejected under 35 U.S.C §112, first paragraph, as it is argued that the claims fail to comply with the enablement requirement. At pages 3 - 13 of the Office Action, essentially three different enablement rejections are made. For brevity of response, all three rejections will be simultaneously discussed in view of the significant overlap of the arguments made in this portion of the Office Action. In particular, the three rejections center upon the anti-tumor utility, the anti-autoimmune utility and the memory disturbances utility. Moreover, it is noted that a rejection under the *second* paragraph of 112 is been made at page 14 of the Office Action concerning the skin disorders utility.

At the outset, it is noted that cancellation of the memory disturbances utility and skin disorders utilities render these portions of the 112 rejections moot, and withdrawal thereof is respectfully requested. Applicants reserve the right to file appropriate divisional applications directed to these utilities, at a later date.

The heart of the remaining rejections, as stated in the Office Action, is the argument that the specification "does not provide sufficient information that all tumors are treatable by the herein claimed compounds" (see page 3 of the Office Action), and that the specification, while enabling for rheumatoid arthritis, multiple sclerosis, Crohn's disease, diabetes mellitus and ulcerative colitis does not provide enablement for *other* autoimmune disorders (see page 7 of the Office Action). Applicants respectfully disagree with this analysis.

First, at page 2, lines 11 - 31, it is taught that the compounds of formula I inhibit PDE VII, and this statement is supported with a discussion of the methods used to determine this activity in the subject compounds. At page 3, lines 8 - 22 of the specification, it is taught that the compounds show an antagonistic effect on the production of TNF alpha, and thus are useful to treat all immune disease, including, *for example*, rheumatoid arthritis, multiple sclerosis, Crohn's disease, diabetes, ulcerative colitis, transplant rejection reactions, cachexia and sepsis. At page 3, lines 30 - 33, it is taught that PDE VII inhibitors may also inhibit the growth of tumor cells and "are therefore suitable" for tumor therapy analogously to PDE IV inhibitors. Clearly, this discussion, *without more* is sufficient to establish utility of the application for purposes of §112 of the statute, as it constitutes a scientifically supportable statement of utility which would be plausible to one of ordinary skill in the art.

It is well established that an unsupported suggestion that reactants within a class defined by claims in a typical method of use application would not work, or that such claims embrace inoperative members, insufficient basis alone for rejecting the claims. See *Ex parte Janin*, 209 U.S.P.Q. 761 (POBA 1979). In fact, it is clear that recitations in an Applicants' specification *must* be taken by the PTO as an assertion that all compounds encompassed in the claims are operative in the invention, in the absence of reasons or evidence to the contrary. *In re Marzocchi*, 439 F.2d 220, 169 U.S.P.Q. 367 (CCPA 1971).

The first paragraph of 35 U.S.C §112 requires only *objective* enablement. Where a

specification teaches the manner and process of making and using the invention, the specification *must* be taken as sufficient under §112, unless there is reason to doubt the truth of these statements. See *Marzocchi*, supra. Applicants' specification clearly enables one to make and use the disclosed compounds in the claimed methods, as evidenced from the disclosure at page 5 - 7 setting forth pharmaceutical formulations and dosages and the examples which also detail the production of a pharmaceutical formulations.

On the one hand, it is submitted that the Examiner has not provided any such reasons or evidence to doubt the assertion of utility in the specification and, thus, the further steps of the analysis as set forth in *Marzocchi* are not reached. The "complex nature of the subject matter" which is "greatly exacerbated by the breadth of the claims" does not rise to the level of such reasons or evidence. As clearly stated in *Marzocchi*, mere *breadth* of the claims does not, without more, result in non-enablement. As the court stated in *Marzocchi*, supra

> Turning specifically to the objections noted by the Board as indicated above, it appears that these comments indicate nothing more than a concern over the *breadth* of the disputed term. If we are correct, then the relevance of this concern escapes us. It has never been contended that Applicants, when they included the disputed terms in their specification, intended only to indicate a single compound. Accepting, therefore, that the term is a generic one, its recitation must be taken as an assertion by Applicants that all of the 'considerable number of compounds' which are included in the generic term would, as a class, be operative to produce the asserted enhancement of adhesion characteristics. The only relevant concern of the patent office under these circumstances should be over the *truth* of any such assertion. The first paragraph of §112 requires nothing more than *objective enablement*. How such a teaching is set forth, either by the use of illustrative examples or by broad term analogy, it is of no importance.

Marzocchi, supra. (Emphasis in original.) Thus, the concern expressed at pages 3 and 7 of the Office Action, apparently that the terms used in the claimed methods are broad, does not provide the reasons or evidence necessary by *Marzocchi* to pass beyond the necessity merely for objective

enablement.

Further, in this regard, it is important to note, as a matter of law, that it is not necessary for Applicants' *method* claims to exclude inoperative embodiments, inasmuch as the claims are interpreted in light of the level of understanding one of ordinary skill in the art and, for methods, are interpreted to be *per se* functional. See *In re Angstadt*, 190 U.S.P.Q. 214 (CCPA 1976) and *In re Dinh-Nguyen*, 181 U.S.P.Q. 46 (CCPA 1974). These cases state that, for method claims, inoperative embodiments are not encompassed therein and the only questions is whether it would be undue experimentation for one of ordinary skill in the art to determine the scope of the claim. This issue is discussed more fully below. Moreover, anti-tumor utilities are no longer to be considered to be "special", i.e., per se incredulous, by the Patent and Trademark Office. See *Ex parte Rubin*, 5 U.S.P.Q. 2d 1461 (BPAI 1987). As such, applications claiming these methods are, therefore, no more than typical method of use applications wherein the existence of reliable screening protocols correlatable with pharmaceutical activity in humans is sufficient to satisfy §112, in the absence of reasons to the contrary. As noted above, screening protocols for determining the efficacy of the compounds in the anti-tumor utilities are set forth in the specification where it is indicated that the details of using a given compound can be determined by routine testing using a known protocol which is correlated with human activity, again, see page 2, lines 18 - 31 and page 3, lines 30 - 34.

Thus, the only way that the issue of "undue experimentation" come up is if the PTO were to furnish reasons or evidence why the objective enablement of the present specification fails (none have been advanced) or it is alleged it would have been undue experimentation to determine the *scope* of the present method claims. This allegation has not been advanced, other than for the skin disorders" utility which is no longer at issue herein. Thus, the discussion of *In re Wands*, taking up a substantial amount of the Office Action, does *not* provide the necessary reasons or evidence as to why utility is deficient, but instead is reached only in other circumstances. However, since this analysis has been given considerable space in the Office Action, it will be addressed herein.

With respect to the nature of the invention, the *complexity* is in fact not supported by the breadth of the claim, as argued, for example, at page 3. In actuality, the nature of the invention is *not* complex, inasmuch as the use of PDE inhibitors to treat various indications is well established and would be well understood by one of skill in the art. With respect to autoimmune disorders noted at

page 8 of the Office Action, in fact the Office Action recognizes that various types of autoimmune disorders *are* enabled by the present specification. There are no reasons why those indications singled out as non-enabled are selected.

With respect to the breadth of the claims, it is important to note that a determination of undue experimentation must be considered on a *compound by compound* basis. The mere fact that a claim is broad does *not* mean that it is undue experimentation is required to determine enablement of the compounds therein, if it is not undue experimentation to determine enablement for *each* compound in the scope of the claim. See, for example, *In re Colianni*, 195 U.S.P.Q. 150 (CCPA 1977). One of ordinary skill in the art can easily determine, with the protocols given in the specification, whether a given compound has the utility stated. Thus, the mere fact that many compounds must be tested is not dispositive of lack of utility.

With respect to the guidance given by the instant specification, is submitted that the guidance is adequate, inasmuch as pharmaceutical formulation information is given, one of ordinary skill in the art can clearly prepare the compounds for administration, dosages are given and the pharmaceutical art is well developed and administration of a compound for a given indication is quite routine. The discussion at pages 4 and 8 of the Office Action appears to be speculation on the part of the PTO that mechanisms are not well understood, however, elucidation of a mechanism is *not* necessary, where sufficient instruction is given to administer the compounds to produce the desired effect. Thus, it is submitted that this is also a non-issue.

With respect to working examples, it is well established that working examples are *not* required to provide enablement. See, for example, *In re Borkowski*, 164 U.S.P.Q. 642 (CCPA 1970).

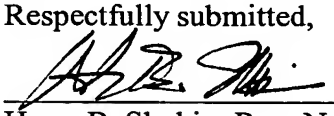
With respect to the state of the art, PDE inhibitors are well known to be implicated in signaling pathways which are instrumental in the formation of tumors. Thus, it is again not seen that this is an issue. With respect to the quantity of invention necessary, this has been discussed above. It is maintained that the fact that a claim may be broad does not, in and of itself, result in undue experimentation, if the testing of, for example, each type of cancer or each autoimmune disorder is routine. Thus, this is not seen to be basis for lack of enablement.

In conclusion, it is submitted that the *Wands* factors clearly do not result in undue experimentation in order to determine whether a given cancer and/or autoimmune disease and/or a

compound is within the scope of the present claims. Thus, objective enablement is clearly present, and withdrawal of the rejection under 35 U.S.C §112 is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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